

THE FOLLOWING IS THE ENGLISH TRANSLATION OF THE
ANNEXES TO THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT UNDER PCT ARTICLE 34:
AMENDED SHEETS (Pages 29, 30, 31, 32, 32a, 32b and 32c) .

Claims

1. An injection backmolded or casting backmolded plastic molding comprising a polymer backmolding film backmolded by injection molding or casting with a fiber reinforced plastic having a fiber content of from 5 to 30%, the back-molding material having a thickness of from 1.5 to 4.5 mm, it being possible for up to 50% by weight of the fibers to have been replaced by mineral fillers, characterized in that the length of the fibers in the fiber reinforced plastic in the plastic molding is at least partly > 1 mm.
2. A plastic molding as claimed in claim 1, characterized in that the film has a thickness of from 0.1 to 1.0 mm.
3. A plastic molding as claimed in claim 2, characterized in that the film has a thickness of from 0.5 to 1.0 mm.
4. A plastic molding as claimed in any of claims 1 to 3, characterized in that the backmolding film is a composite laminated film comprising, in this order:
 - (1') a substrate layer
 - comprising an ASA molding composition comprising components A and B, and where appropriate C, whose total amount is 100% by weight,
 - a 1 - 99% of a graft copolymer of

a1 1 - 99% by weight of a particulate graft A1 comprising the following monomers

a11 80 - 99.99% by weight of at least one C₁₋₁₈ alkyl ester of acrylic acid as component A11,

a12 0.01 - 20% by weight of at least one polyfunctional crosslinking monomer as component A12,

a2 1 - 99% by weight of a graft A2 comprising the following monomers, based on A2,

a21 40 - 100% by weight of units of styrene, a substituted styrene or a (meth)acrylate or mixtures thereof as component A21, and

a22 up to 60% by weight of units of acrylonitrile or methacrylonitrile as component A22,

the graft A2 here consists of at least one graft shell, the graft copolymer having a mean particle size of 50 - 1000 nm,

as component A,

b 1 - 99% by weight of a copolymer of

b1 40 – 100% by weight of units of styrene, a substituted styrene or a (meth)acrylate or mixtures thereof as component B1,

b2 up to 60% by weight of acrylonitrile or methacrylonitrile as component B2,

as component B,

c 0 – 80% by weight of polycarbonate as component C,

or a substrate layer comprising

ABS, polycarbonate, polybutylene terephthalate, polyethylene terephthalate, polyamide, polyetherimide, polyether ketone, polyphenylene sulfide, polyphenylene ether, or blends thereof,

(2') if desired, an interlayer of polymethyl methacrylate, high-impact polymethyl methacrylate, ABS, polycarbonate, polyethylene terephthalate, styrene-acrylonitrile copolymers, polyamide, polyether sulfone or polysulfone, which may comprise effect colorants, having a layer thickness of from 50 to 400 μm ,

(3') a transparent top layer, comprising polymethyl methacrylate, high-impact polymethyl methacrylate, ABS, polycarbonate, polyethylene terephthalate, styrene-acrylonitrile copolymers,

polyamide, polyether sulfone PVDF or polysulfone, having a layer thickness of from 10 to 100 μm .

5. A plastic molding as claimed in claim 4, characterized in that the thickness of the substrate layer (1') is from 90 to 990 μm , that of the interlayer (2') from 50 to 400 μm , and that of the top layer (3') from 10 to 100 μm .
6. A plastic molding as claimed in claim 4 or 5, characterized in that the backmolding film on the outer face of the substrate layer comprises a tie layer having a thickness of from 5 to 100 μm and comprising an adhesion promoter.
7. A plastic molding as claimed in any of claims 1 to 6, characterized in that the fiber reinforced plastic is a material as defined in claim 4 for the substrate layer (1').
8. A plastic molding as claimed in any of claims 1 to 7, characterized in that the fibers in the plastic are glass fibers.
9. A plastic molding as claimed in any of claims 1 to 8, characterized in that the polymer backmolding film comprises an interlayer (2') of PMMA or high-impact PMMA, which comprises effect colorants, and the transparent top layer (3') is composed of PMMA, PVDF or high-impact PMMA.
10. A plastic molding as claimed in any of claims 1 to 9, characterized in that the fiber reinforced plastic is a blend of polycarbonate (PC) or polybutylene terephthalate (PBT) with an ASA molding composition, or is an ABS or PBT molding composition.

11. A process for producing an injection backmolded or casting backmolded plastic molding as claimed in any of claims 1 to 10 by

producing the backmolding film by adapter coextrusion or die coextrusion of the respective components (1') and/or (2') and/or (3'), the entire composite being produced in a single-stage process, or by laminating films of the components in a heatable nip,

thermoforming the backmolding film in a mold, and injection backmolding or casting behind the backmolding film with the fiber reinforced plastic, characterized in that the fibers are introduced directly during processing, so that their length in the component is at least partly > 1 mm.

12. The use of an injection backmolded or casting backmolded plastic molding as claimed in any of claims 1 to 10 as or in automotive exterior bodywork parts.

Claims

13. A plastic molding comprising a polymer backmolding film which is compression backmolded with a glass fiber reinforced ASA/PC plastic having a fiber content of from 5 to 30% by weight by the melt application or LFT technique, the ASA/PC plastic having a thickness of 1.5 to 4.5 mm, characterized in that the length of the glass fibers in the glass fiber reinforced plastic in the plastic molding is at least partly > 1 mm.
14. A plastic molding comprising a polymer backmolding film which is compression backmolded with a short glass fiber reinforced PBT/ASA plastic having a fiber content of from 5 to 30% by weight by the melt application technique, the PBT/ASA plastic having a thickness of from 1.5 to 4.5 mm.
15. A plastic molding as claimed in claim 13 or 14, characterized in that it comprises the additional features of one or more of claims 2 to 6 and 9.
16. A process for producing a plastic molding as claimed in claim 13 by

producing the backmolding film by adapter coextrusion or die coextrusion of the respective components (1') and/or (2') and/or (3'), the entire composite being produced in a single-stage process, or by laminating films of the components in a heatable nip,

thermoforming the backmolding film in a mold, and compression backmolding the backmolding film with the fiber reinforced plastic,

characterized in that the fibers are introduced directly during processing, so that their length in the component is at least partly > 1 mm.

17. The use of a plastic molding as claimed in any of claims 13 to 15 as or in automotive exterior bodywork parts.